

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Sub B1
Claims 1-17 (canceled)

Claim 18 (new): A digital camera, comprising:

an imager including a vertical transfer register having a plurality of transfer areas, a horizontal transfer register connected to an output terminal of said vertical transfer register, and a plurality of light-receiving elements respectively assigned to said plurality of transfer areas;

a timing generator connected to said imager, and for applying timing signals to said imager, said timing signals including a first exposure signal for carrying out a first exposure of a first time period, a second exposure signal for carrying out after said first exposure a second exposure of a second time period, which is shorter than said first time period, a first reading signal for reading-out from the light-receiving elements (intermittently) present in a vertical direction to said vertical transfer register a first electric charge generated by said first exposure, a second reading signal for reading-out from the light-receiving elements respectively assigned to vacant transfer areas in which no electric charge is present to said vertical transfer register a second electric charge generated by said second exposure, a vertical transfer signal for transferring the electric charge read-out to said vertical transfer register in a vertical direction,

and a horizontal transfer signal for transferring in a horizontal direction the electric charge that reaches said horizontal transfer register by a transfer in accordance with said vertical transfer signal; and

a processor for generating one screen of a first image signal based on said first electric charge and said second electric charge output from said imager.

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Claim 19 (new): A digital camera according to claim 18, wherein the light-receiving element from which said second electric charge is read-out is equal to the light-receiving element from which said first electric charge is read-out, and said second electric charge is read-out to said vertical transfer register at the same time that a vertical transfer of said first electric charge is started or after the vertical transfer of said first electric charge is started.

Claim 20 (new): A digital camera according to claim 19, wherein the light-receiving element from which said first electric charge is read-out intermittently presents in a vertical direction using successive N ($N \geq 1$) of elements as one unit, and said first electric charge moves over a distance corresponding to at least N of the light-receiving elements until said second electric charge is read-out.

Claim 21 (new): A digital camera according to claim 20, further comprising a monitor for displaying an image based on said first image signal.

Claim 22 (new): A digital camera according to claim 18, further comprising:
an instruction key for inputting an imaging instruction; and
a shutter member arranged at a front surface of said imager, and for cutting-off an irradiation of light into said imager; wherein said timing signal further includes a third exposure signal output in response to an operation of said instruction key, and for carrying out a third exposure of a third time period, a third reading signal for reading out from said plurality of light-receiving elements to said vertical transfer register a third electric charge generated by said third exposure, a second vertical transfer signal for transferring in a vertical direction said third electric charge on said vertical transfer register, a second horizontal transfer signal for transferring in a horizontal direction said third electric charge applied to said horizontal transfer register, a fourth exposure signal for carrying out a fourth exposure after said third exposure, a driving signal output after a fourth time period, which is different from said third time period, has passed since a time of starting said fourth exposure, and for driving said shutter member, a fourth reading signal for reading out a fourth electric charge generated by said fourth exposure from said plurality of light-receiving elements to said vertical transfer register after a completion of a vertical transfer of said third electric charge, a third vertical transfer signal for transferring in a vertical direction said fourth electric charge on said vertical transfer register, and a third horizontal transfer signal for transferring in a horizontal direction said fourth electric charge applied to said horizontal transfer register, and said processor generating one screen of a second image signal based on said third electric charge and fourth electric charge output from said imager.

Claim 23 (new): A digital camera according to claim 22, further comprising a recorder for recording said second image signal into a recording medium in a compressed state.

Claim 24 (new): A digital camera, comprising:

an imager including a vertical transfer register having a plurality of transfer areas, a horizontal transfer register connected to an output terminal of said vertical transfer register, and a plurality of light-receiving elements respectively assigned to said plurality of transfer areas;

an exposure controller for controlling an exposure of said imager by using an electric shutter system;

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a reader for reading out from a portion of said plurality of light-receiving elements to said vertical transfer register an electric charge generated by an exposure of said exposure controller;

a vertical transferor for transferring in a vertical direction the electric charge read-out to said vertical transfer register by said reader;

a horizontal transferor for transferring in a horizontal direction the electric charge that reaches said horizontal transfer register by a transfer of said vertical transferor, wherein said exposure controller carries out a first exposure of a first time period, and carries out after said first exposure a second exposure of a second time period, which is shorter than said first time period, said reader reading out from the light-receiving elements intermittently present in a vertical direction to said vertical transfer register a first electric charge generated by said first exposure, reading out from the light-receiving elements respectively assigned to vacant transfer areas in which no electric charge is present to said vertical transfer register a second electric

charge generated by said second exposure, and

said digital camera further comprising a generator for generating one screen of a first image signal based on said first electric charge and said second electric charge output from said imager.

Claim 25 (new): A digital camera according to claim 24, wherein the light-receiving element from which said second electric charge is read-out is equal to the light-receiving element from which said first electric charge is read-out, said reader reads out said second electric charge to said vertical transfer register at the same time that a vertical transfer of said first electric charge is started or after the vertical transfer of said first electric charge is started.

Claim 26 (new): A digital camera according to claim 25, wherein the light-receiving element from which said first electric charge is read-out intermittently presents in a vertical direction using successive N ($N \geq 1$) of elements as one unit, and said vertical transferor moves said first electric charge over a distance corresponding to at least N of the light-receiving elements until said second electric charge is read-out.

Claim 27 (new): A digital camera according to claim 24, further comprising a monitor for displaying an image based on said first image signal.

Claim 28 (new): A digital camera according to claim 24, further comprising: an

instruction key for inputting an imaging instruction;

a shutter member arranged at a front surface of said imager, and for cutting-off an irradiation of light into said imager; and

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a driver for driving said shutter member, wherein said exposure controller carries out a third exposure of a third time period in response to an operation of said instruction key, and starts a fourth exposure after said third exposure, said reader reads out from said plurality of light-receiving elements to said vertical transfer register a third electric charge generated by said third exposure, and reads out a fourth electric charge generated by said fourth exposure from said plurality of light-receiving elements to said vertical transfer register after a completion of a vertical transfer of said third electric charge, said driver drives said shutter member when a fourth time period, which is different from said third period, has passed since a time of starting said fourth exposure, and said generator generates one screen of a second image signal based on said third electric charge and said fourth electric charge output from said imager.

Claim 29 (new): A digital camera according to claim 28, further comprising a recorder for recording said second image signal into a recording medium in a compressed state.